THE CHALLENGES OF AGROFORESTRY IN THE INTERNATIONAL YEAR OF SOILS

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The presence of trees in farming systems, although an ancient practice, began to gain institutional attention during the 1970s and 1980s, with the beginning of studies on "agroforestry systems" (Pinho et al. 2012). According to Lundgreen and Raintree (1982), agroforestry is a collective name for land-use systems and technologies where woody perennials (trees, shrubs, palms, bamboos, etc.) are deliberately used on the same land-management units as agricultural crops and/or animals, in some form of spatial arrangement or temporal sequence.

In general, the soils are in danger because of expanding cities, deforestation, unsustainable land use and management practices, pollution, overgrazing and climate change. The current rate of soil degradation threatens the capacity to meet the needs of future generations. The promotion of sustainable soil and land management is crucial to ensuring a productive food system, improved rural livelihoods and a healthy environment.

The 68th United Nations General Assembly declared 2015 the International Year of Soils (IYS) and the Food and Agriculture Organization of the United Nations (FAO) has been nominated to implement the IYS 2015, within the framework of the Global Soil Partnership and in collaboration with Governments and the secretariat of the United Nations Convention to Combat Desertification.

The United Nations recognizes "that the sustainability of soils is key to addressing the pressures of a growing population and that recognition, advocacy and support for promoting sustainable management of soils can contribute to healthy soils and thus to a food-secure world and to stable and sustainably used ecosystems" and invites "international and regional organizations, as well as civil society, non-governmental organizations and individuals, to observe the Year".

The specific objectives of the IYS 2015 (FAO 2015) are:

- To raise full awareness among civil society and decision makers about the profound importance of soil for human life

- To educate the public about the crucial role soil plays in food security, climate change adaptation and mitigation, essential ecosystem services, poverty alleviation and sustainable development

- To support effective policies and actions for the sustainable management and protection of soil resources

- To promote investment in sustainable soil management activities to develop and maintain healthy soils for different land users and population groups

- To strengthen initiatives in connection with the SDG process (Sustainable Development Goals) and Post-2015 agenda

- To advocate for rapid capacity enhancement for soil information collection and monitoring at all levels (global, regional and national).

With intensified agriculture and reduced fallowing periods, soil fertility has emerged as a key problem in many farming systems especially throughout the tropics. An agroforestry practice for improving soil fertility is biomass transfer – the manual transfer of green manure to crops – which increases vegetable yields, extends the harvesting season and improves the quality of the production (FAO 2005).

Currently agroforestry is a common practice in China, India and in many tropical countries. In Europe the land dedicated to agroforestry practices (including many woody species) is variable, ranging from 3242 ha in Denmark to 400000 ha in Germany. In Spain there are 13484 ha under the traditional agroforestry system called “dehesa”.

It should be noted, moreover, that soil conservation is closely linked to the conservation of biodiversity. A step forward to achieve this goal has been given by the European Union (EU) to declare the protected Natura 2000 sites (EEC, 1992). Some ecosystems as the “dehesa” are well-known for their great environmental value in the European Union common policy.

In the protected areas included in the network Natura 2000 it is intended the global conservation of the most unique European habitats, known as habitats of EU interest, considering the biocenosis that define them. Also the visual impact of the geology and the flora that determines the landscape is also included in EU conservation policy. The agroforestry landscape shows its great value, both aesthetically and environmentally.

These practices, that combine trees and crops, are therefore very positive for the environment, maintaining the diversity of ecosystems, protecting soils from erosion, and preserving their fertility. For this reason, the achievement of the objectives of the IYS should include the promotion of agroforestry practices, involving in these task farmers, forest and farm technicians and policy makers.

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